

# Asset Size, Asset Growth, and Stock Returns; an Empirical Analysis, 2008-2017

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## Study Purpose

The objective of this study is to determine the long term effects of firm size and asset growth on stock returns during and after the 2008 recession.

## Performance Hypothesis

- **Size:**  
Small = S, Large = L,  
S>L
- **Growth:**  
High asset growth = H.A.G.  
Low asset growth = L.A.G.  
L.A.G.>H.A.G.
- **Asset growth/size:**  
H.A.G.-S.>H.A.G.-L.  
L.A.G.-S.>L.A.G.-L.
- **Investment strategies:**  
Buy & Hold  
Rebalanced
- **Sample universe:**  
S&P 500 stocks
- **Periods of analysis:**  
2008-2017  
2009-2017
- **Portfolio construction:**  
Top 50 and bottom 50 stocks  
by size and asset growth

## Conclusion: Buy & Hold strategy

- **Size:**  
S>L; finding is consistent with previous academic research.
- **Growth:**  
HAG>LAG; finding contrasts previous academic research.
- **Asset growth/size: Previous Research**
  - HAG-S>HAG-L → consistent
  - LAG-S(> <)HAG-L → mixed results
  - LAG-L>HAG-L → consistent
  - HAG-S>LAG-S → contrary

## Conclusion: Rebalanced strategy

- **Size:**  
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- **Growth:**  
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- **Asset growth/size: Previous Research**
  - HAG-S<HAG-L → contrary
  - LAG-S>LAG-L → consistent
  - HAG-L>LAG-L → contrary
  - LAG-S>HAG-S → consistent

## Conclusion: Recession Effect

- Excluding the 2008 recession, all size/asset growth portfolios had higher cumulative returns.

## Conclusion: All Portfolio Returns

- **Top Return Portfolios**
  1. B&H, HAG-S
  2. B&H, S
  3. RB, LAG-S
- **Common factor** → size (small)

**Table 1**  
Cumulative Returns  
Buy & Hold Strategy

Portfolio Type	2008-2017		2009-2017	
	Return	Alpha*	Return	Alpha*
L.	26.97%	-78.24%	98.36%	-141.98%
S.	277.23%	172.02%	328.58%	88.25%
H.A.G.	117.70%	12.49%	240.08%	-0.26%
L.A.G.	92.46%	-12.75%	212.88%	-27.45%
H.A.G.-L.	84.86%	-20.35%	200.15%	-40.19%
H.A.G.-S.	381.04%	275.82%	511.77%	271.43%
L.A.G.-L.	87.01%	-18.21%	224.96%	-15.37%
L.A.G.-S.	126.42%	21.21%	142.12%	-98.22%

\* Excess returns over S&P 500 ETF (SPY)

**Table 2**  
Cumulative Returns  
Rebalanced Strategy

Portfolio Type	2008-2017		2009-2017	
	Return	Alpha	Return	Alpha
L.	38.58%	-66.63%	115.71%	-124.62%
S.	199.96%	94.75%	332.18%	91.85%
H.A.G.	113.74%	8.53%	269.19%	28.86%
L.A.G.	101.60%	-3.61%	228.55%	-11.78%
H.A.G.-L.	113.61%	8.40%	269.56%	29.22%
H.A.G.-S.	102.43%	-2.78%	245.34%	5.00%
L.A.G.-L.	97.40%	-7.81%	221.93%	-18.41%
L.A.G.-S.	147.74%	42.53%	302.16%	61.83%